#1 Transitioning the GOES-R Fog and Low Stratus Products from Research To Operations Through the NWS Operations Proving Ground

Chad Gravelle[1], Michael Pavolonis[2], Kim Runk[3]
[1]Cooperative Institute for Meteorological Satellite Studies, National Weather Service Operations Proving Ground, Kansas City, MO
[2]Center for Satellite Applications and Research, NOAA Satellite and Information Service, Madison, WI
[3]National Weather Service Operations Proving Ground, Kansas City, MO

The Geostationary Operational Environmental Satellite R-series (GOES-R) Proving Ground is a collaborative effort between the GOES-R Program Office, National Oceanic and Atmospheric Administration (NOAA) Cooperative Institutes, a NASA center, National Weather Service (NWS) Forecast Offices, National Centers for Environmental Prediction (NCEP), and NOAA Testbeds where the user community is prepared for imagery and data that has improved spectral resolution, spatial resolution, and temporal flash rate. One set of GOES-R future capability products assist with the identification of fog and low stratus (FLS) ceilings. Developed by NOAA/NESDIS/STAR and the University of Wisconsin-CIMSS, these products include probabilities of Low Instrument Flight Rules, Instrument Flight Rules, and Marginal Visual Flight Rules, as well as Cloud Geometric Depth and Cloud Top Phase.

The GOES-R FLS algorithm transitioned from scientific concept in 2008 to a useful real-time product approximately 2 1/2 years later. During this time, the individual products were created, validated, and disseminated through the Unidata Local Data Manager. Once this development phase was complete, the products and training were introduced to a small group of NWS forecasters in Alaska and Milwaukee, Wisconsin. Initial feedback from the forecasters led to improvements to the algorithm and a significant enhancement to the product training. Between 2011 and 2013, the GOES-R FLS products were extensively evaluated by forecasters at 24 NWS Forecast Offices and the Aviation Weather Center. These forecaster evaluations were coordinated by NWS Operations Proving Ground and then presented to the algorithm developers and GOES-R Proving Ground. Feedback collected during this time was predominantly positive and the suite of FLS products has begun the official transition to operations which is tentatively planned for April 2016. This presentation will illustrate how the collaboration between the GOES-R Proving Ground and NWS Operations Proving Ground led to the FLS product suite being transitioned from scientific concept to NWS operations.